CLAIMS

1. An organic EL drive circuit for current-driving an organic EL display panel by generating drive currents or a current, on which the drive currents are generated, correspondingly to respective output terminals connected to a number of column pins or terminal pins, comprising:

a plurality of current generator circuits provided correspondingly to the output terminals for generating predetermined currents correspondingly to the output terminals, respectively;

a plurality of current sources provided correspondingly to the output terminals and, in response to the predetermined currents from the current generator circuits correspondingly to the output terminals, for generating the drive currents or the current, on which the drive currents are generated, correspondingly to the output terminals, respectively; and

a plurality of selection circuits provided between the current generator circuits and the current sources correspondingly to the output terminals, respectively,

wherein the selection circuits select the predetermined current of the current generator circuits corresponding to the output terminals assigned to the selection circuits or the predetermined current from the current generator circuits corresponding to the output terminals adjacent to the current generator circuit, correspondingly to a row side scanning or a scan line scanning.

2. An organic EL drive circuit as claimed in claim 1,

further comprising a control circuit for generating a predetermined control signal corresponding to the row side scan for one horizontal line to switch the selection of the selection circuit, wherein each of the selection circuits receives the predetermined current from the current generator circuits corresponding to the output terminal assigned thereto and the output terminal adjacent to the assigned output terminal according to the predetermined control signal and supplies the selected predetermined current to the current source corresponding to the assigned output terminal.

3. An organic EL drive circuit as claimed in claim 2, wherein the organic EL drive circuit is a driver IC and each of the selection circuits has at least n inputs, where n is an integer equal to or larger than 2, and one output, each of the n inputs receives the predetermined currents from the current generator circuits corresponding to the output terminal assigned to the selection circuit and to an output terminal adjacent to the assigned output terminal and the one output supplies the predetermined current inputted to any one of the n inputs to the current source corresponding to the output terminal assigned thereto to select one of the n inputs according to the predetermined control signal.

4. An organic EL drive circuit as claimed in claim 3, wherein the current generators are constructed with a current distribution circuit, which is response to the reference current to distribute currents each substantially equal to the reference current or currents each amplified to the output terminals and the

predetermined currents in the current generator circuits are the output currents distributed to the output terminals, respectively.

5. An organic EL drive circuit as claimed in claim 4, wherein the current distribution circuit is constructed with a current mirror circuit having an input side transistor and n output side transistors, where n is an integer equal to or larger than the number of the output terminals, the current generator circuits are assigned to the n output side transistors, respectively, the input side transistor receives the reference current and generate the predetermined currents in the respective output side transistors, at least three of the n inputs of the selection circuits receive currents outputted by the output side transistors provided correspondingly to the assigned output terminal and the output terminals adjacent to the assigned output terminal as the predetermined currents.

6. An organic EL drive circuit as claimed in claim 5, further comprising a reference current generator circuit for generating the reference current and dummy current generator circuits each equivalent to the current generator circuit provided adjacent to an initial output terminal and a last output terminal of the output terminals, respectively, wherein the predetermined currents of the dummy current generator circuits are inputted to one of the n inputs of the selection circuit corresponding to the initial and last output terminals, respectively.

7. An organic EL drive circuit as claimed in claim 6,

wherein n is 3, the selection circuit includes a 3-input, 1-output multiplexer provided correspondingly to each of the output terminals, the predetermined control signal is supplied to the multiplexers and is generated repeatedly with a row side scanning of 3 horizontal lines as a unit.

8. An organic EL drive circuit as claimed in claim 7, wherein the current source is constructed with a D/A converter circuit and an output stage current source for outputting the drive current, the D/A converter circuit is responsive to the predetermined current selected by the selection circuit corresponding to the assigned output terminal and display data to generate an analog converted current with which the output stage current source is driven.

9. An organic EL drive circuit as claimed in claim 5 wherein n is 3, the selection circuit includes a 3-input, 1-output multiplexer provided correspondingly to each of the output terminals, the predetermined control signal is supplied to the multiplexers and is generated repeatedly with a row side scanning of 3 horizontal lines as a unit.

10. An organic EL drive circuit as claimed in claim 6, wherein the conrol circuit includes a n-stage ring counter and the predetermined control signal is generated by shifting bit "1" or "0" from an initial stage to a last stage of the ring counter.

11. An organic EL display device comprising an organic EL drive circuit as claimed in any of claims 1 to 10 and the organic EL panel.